

Book Review

Juzen-taiho-to (Shi-Quan-Da-Bu-Tang): Scientific Evaluation and Clinical Application

Il-Moo Chang

Natural Products Research Institute, Seoul National University, Seoul 110-460, Korea

Haruki Yamada and Ikuo Saiki (eds), CRC Press, **ISBN-10:** 0-415-30830-5, **ISBN-13:** 978-0-415-30830-4.

This book is one of a series entitled 'Traditional Herbal Medicines for Modern Times' and contains collective and cumulative research works made by only Japanese scientists using a single traditional herbal formula, namely Juzen-taiho-to (Shi-Quan-Da-Bu-Tang in Chinese pronunciation). Hence, it covers limited information concerning research outcomes using this formula. Nevertheless, there are useful advantages and merits to understand pharmacology and clinical application of the formula from the view of modern medical science. Research results were found by modern scientists, including modern clinicians (Western medicine trained) and not by traditional oriental doctors. (In Japan, no higher educational institution is available legally for traditional medical doctors.) Thus, it is obvious to us that this book provides understandable information on a traditional herbal remedy for Western scientists and clinicians, especially those who have interest in traditional oriental herbal therapy.

This particular formula appeared in a traditional Chinese medical classic that was published nearly a thousand years ago and has been used for treatment of general weakness, anemia, anorexia, fatigue, etc. and is a famous tonic remedy. It is a multi-herb formulation consisting of 10-component herbal materials derived actually from a combination of two separate formulae. This book contains a wide range of information on the formula in which a general introduction on traditional Kampo (a Japanese version of traditional oriental medicine) medicines, mechanism of action of the formula such as an immunomodulating activity, plausible active ingredients of the formula, a variety of clinical case studies on atopy, adjuvant cancer chemotherapy, toxicology of the formula and even botanical information of each component herb. A brief sum-

mary of each chapter will give an outline of this book as follows.

Chapter 1. An introduction by H. Yamada. This chapter contains an overview of Kampo medicines, describing some discrepancies between Western and Kampo medicines, and postulates of target (pathogen)-oriented therapy by Western medicine and holistic remedy by Kampo medicine.

Chapter 2. Crude drugs of Juzen-taiho-to by S. Nunome, H. Kiyohara, K. Komatsu and T. Takeda. This chapter describes botanical and taxonomical characterization of 10-component herbs that comprise the formula.

Chapter 3. Therapeutic indications of Juzen-taiho-to in modern therapy by T. Hanawa. This chapter reviews and summarizes clinical indications obtained from case studies in Japan. The formula shows activities for atopic dermatitis, cancer, side-effects of cancer radiotherapy, ulcerative colitis and post-operative cancer chemotherapy.

Chapter 4. Immunological properties of Juzen-taiho-to by T. Matsumoto and H. Yamada. This chapter summarizes how the formula enhances the immune system to maintain homeostasis from imbalance due to disease. One basic pharmacological mode of action appears to be the stimulation of immune mechanisms.

Chapter 5. Hemopoiesis-stimulatory effects of Juzen-taiho-to by H. Hisha and S. Ikehara. The authors emphasize that unsaturated fatty acid components possess hemopoiesis-stimulatory effects on bone marrow cells, which is a possible mode of action. Unfortunately, a printing error occurs in Figure 5.7 in which the designation of the photos, left and right should be changed into upper and lower.

Chapter 6. Preventive effects of Juzen-taiho-to on infectious diseases by S. Abe, N. Yamaguchi, S. Tansho and H. Yamaguchi. These authors describe that the formula is useful for treatment of infection in immunosuppressed patients, especially fungal infections such as *Candida* and *Aspergillus*. Prophylactic activity against *Candida* infection may be due to the polysaccharides portion. In addition, it is

For reprints and all correspondence: Il-Moo CHANG, Natural Products Research Institute, Seoul National University, Seoul 110-460, Korea; E-mail: changim@snu.ac.kr

© 2006 The Author(s).

This is an Open Access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/2.0/uk/>) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.

effective in laboratory animals infected with *Pseudomonas aeruginosa*.

Chapter 7. The search for active ingredients of Juzen-taiho-to by H. Kiyohara and H. Yamada. This chapter describes that each constituent isolated from different component herbs in the formula shows different pharmacological activities against various ailments. The authors summarize the ingredients, especially small molecular substances, isolated from each component herb.

Chapter 8. Effects of Juzen-taiho-to by I. Saiki. This chapter summarizes activities of the formula against carcinogenesis, tumor progression and metastasis in laboratory animals. In addition, usefulness of the formula as an adjuvant cancer chemotherapy and radiation therapy in rodents is described.

Chapter 9. Juzen-taiho-to in combination with chemotherapy and radiotherapy by K. Sugiyama. This chapter summarizes an adjuvant therapy using the formula *cis*-platin and its derivatives, and mitomycin in laboratory animals. The formula reduces side-effects of chemotherapeutic agents and radiation.

Chapter 10. Antitumor effects in combination with chemotherapy by K. Tarao and T. Okamoto. This chapter presents clinical effects of the formula as an adjuvant agent in combination with anticancer agents against various cancers including gastric, colorectal, hepatocellular, breast, gynecological, urological and lung. The formula alleviates side-effects resulting from chemotherapy after using

5-fluorouracil, *cis*-platin, adriamycin, mitomycin and cyclophosphamide. It also improves the quality of life of cancer patients.

Chapter 11. Toxicology and side effects of Juzen-taiho-to by O. T. Iijima, T. Yanagisawa, H. Takeda and T. Matsumiya. The authors discuss that the formula exhibits no appreciable toxicity within normal dose ranges with single doses and repeated dose experiments. However, certain component herbs show slight mutagenic activities in Ames test and micro-nucleus test as well. No significant teratogenic toxicity has been revealed by oral administration of the formula. Some side-effects including rash and gastrointestinal discomfort have been observed.

Chapter 12. Formulations related to Juzen-taiho-to: Hochu-ekki-to and Ninjin-yoei-to by Y. Komatsu. The author summarizes traditional tonic formulae related to the Juzen-taiho-to. Clinical effectiveness in terms of traditional and modern medicines is discussed. It is of interest that Hochu-ekki-to is useful for treating male impotence.

Appendix 1. Formula composition of Juzen-taiho-to.

Appendix 2. Composition of Kampo formulae (A total of 25 formulae) used frequently.

Appendix 3. Chinese and Japanese herbs in Kampo medicines. There is a printing error (p. 233—scientific plant ‘nameand’ part used should be corrected to ‘name and’).

In general, this book provides useful knowledge as a starting point for those researchers and clinicians who are trying to understand the wisdom of traditional Oriental herbal therapy.